

Please type a plus sign (+) inside this box → ☐

PTO/SB/01 (10-00)  
Approved for use through 10/31/2002. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)</b>  <input checked="" type="checkbox"/> Declaration Submitted with Initial Filing      OR <input type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)	<b>Attorney Docket Number</b>	284867-00019
	<b>First Named Inventor</b>	Billy Wayne Crue
	<b>COMPLETE IF KNOWN</b>	
	<b>Application Number</b>	/
	<b>Filing Date</b>	
	<b>Group Art Unit</b>	
	<b>Examiner Name</b>	

**As a below named inventor, I hereby declare that:**

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Perpendicular Magnetic Recording Head Having a Flux  
Focusing Main Pole

*(Title of the Invention)*

the specification of which

☒ is attached hereto  
OR  
☐ was filed on (MM/DD/YYYY)  as United States Application Number or PCT International  
Application Number  and was amended on (MM/DD/YYYY)  (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date (MM/DD/YYYY)	<input type="checkbox"/> Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.
60/189,359	03/15/2000	

Please type a plus sign (+) inside this box → ☐


PTO/SB/01 (10-00)  
 Approved for use through 10/31/2002. OMB 0851-0032  
 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**DECLARATION — Utility or Design Patent Application**

Direct all correspondence to: <input type="checkbox"/> Customer Number or Bar Code Label <input type="text"/>		OR <input checked="" type="checkbox"/> Correspondence address below	
Name William F. Lang, IV			
Address Eckert Seamans Cherin & Mellott, LLC			
Address 600 Grant Street, 44th Floor			
City Pittsburgh	State PA	ZIP 15219	
Country US	Telephone 412/566-2024	Fax 412/566-6099	
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.			
NAME OF SOLE OR FIRST INVENTOR :		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any)) Billy Wayne		Family Name or Surname Crue	
Inventor's Signature <i>Billy Wayne Crue</i>		Date 3/15/01	
Residence: City Pittsburgh	State PA	Country US	Citizenship US
Mailing Address 833 Greentree Road, Apt. 4C			
Mailing Address			
City Pittsburgh	State PA	ZIP 15220	Country US
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any)) Sakhrat		Family Name or Surname Khizroev	
Inventor's Signature <i>Sakhrat Khizroev</i>		Date 03/15/01	
Residence: City Pittsburgh	State PA	Country US	Citizenship Russia
Mailing Address 6380 Caton Street			
Mailing Address			
City Pittsburgh	State PA	ZIP 15217	Country US
<input checked="" type="checkbox"/> Additional inventors are being named on the <u>1</u> supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.			

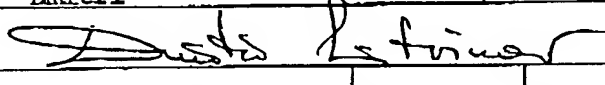
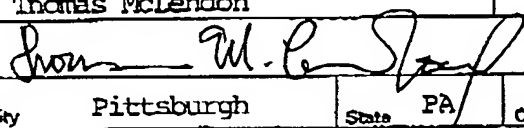
[Page 2 of 2]

Please type a plus sign (+) inside this box → 

PTO/SB/02A (11-00)  
 Approved for use through 10/31/2002. OMB 0651-0032  
 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>DECLARATION</b>	<b>ADDITIONAL INVENTOR(S)</b> Supplemental Sheet Page <u>1</u> of <u>1</u>
--------------------	--

Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Dmitri		Litvinov	
Inventor's Signature 		Date 03/15/01	
Residence: City Pittsburgh	State PA	Country US	Citizenship Ukraine
Mailing Address 5463 Wilkins Avenue			
Mailing Address			
City Pittsburgh	State PA	ZIP 15217	Country US
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Thomas McLendon		Crawford	
Inventor's Signature 		Date 03/15/01	
Residence: City Pittsburgh	State PA	Country US	Citizenship US
Mailing Address 5 Worthington Road			
Mailing Address			
City Pittsburgh	State PA	ZIP 15238	Country US
Name of Additional Joint Inventor, if any:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
Mailing Address			
City	State	ZIP	Country

Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → +

PTO/SB/81 (10-00)

Approved for use through 10/31/2002. OMB 0551-0035

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY OR  
AUTHORIZATION OF AGENT**

Application Number	
Filing Date	
First Named Inventor	Billy Wayne Crue
Group Art Unit	
Examiner Name	
Attorney Docket Number	284867-00019

I hereby appoint:

☒ Practitioners at Customer Number

3705

Place Customer  
Number Bar Code  
Label here~~OR~~ and☒ Practitioner(s) named below:

Name	Registration Number
Carol I. Bordas	37,284

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Firm or  
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

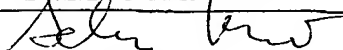
I am the:

☒ Applicant/Inventor.
☐ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).
**SIGNATURE of Applicant or Assignee of Record**

Name

Sakhrat Khizroev

Signature



Date

03/14/01

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒ \*Total of 4 forms are submitted.

Burien Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/31 (10-00)

Approved for use through 10/31/2002, OMB 0651-0035

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY OR  
AUTHORIZATION OF AGENT**

Application Number

Filing Date

First Named Inventor

Billy Wayne Crue

Group Art Unit

Examiner Name

Attorney Docket Number

284867-00019

I hereby appoint:

☒ Practitioners at Customer Number

3705

Place Customer  
Number Bar Code  
Label here~~OR~~ and☒ Practitioner(s) named below:

Name	Registration Number
Carol I. Bordas	37,284

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Firm or  
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).**SIGNATURE of Applicant or Assignee of Record**

Name

Dmitri Litvinov

Signature

Date

03/14/01

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 4 forms are submitted.

Burien Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → ☐

PTO/SB/81 (10-00)

Approved for use through 10/31/2002, OMB 0651-0035

U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY OR  
AUTHORIZATION OF AGENT**

Application Number	
Filing Date	
First Named Inventor	Billy Wayne Crue
Group Art Unit	
Examiner Name	
Attorney Docket Number	284867-00019

I hereby appoint:

☒ Practitioners at Customer Number

3705

Place Customer  
Number Bar Code  
Label here~~and~~☒ Practitioner(s) named below:

Name	Registration Number
Carol I. Bordas	37,284

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Firm or  
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:

☒ Applicant/Inventor.
☐ Assignee of record of the entire interest. See 37 CFR 3.71.  
 Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).
**SIGNATURE of Applicant or Assignee of Record**

Name

Thomas McLendon Crawford

Signature

Date

3/14/01

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☒ \*Total of 4 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box 

PTO/SB/B1 (10-00)

Approved for use through 10/31/2002. OMB 0651-0035

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**POWER OF ATTORNEY OR  
AUTHORIZATION OF AGENT**

Application Number	
Filing Date	
First Named Inventor	Billy Wayne Crue
Group Art Unit	
Examiner Name	
Attorney Docket Number	284867-00019

I hereby appoint:

☒ Practitioners at Customer Number

3705

Place Customer  
Number Bar Code  
Label here~~OR~~ and☒ Practitioner(s) named below:

Name	Registration Number
Carol I. Bordas	37,284

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please change the correspondence address for the above-identified application to:

☐ The above-mentioned Customer Number.

OR

☐ Firm or  
Individual Name

Address

Address

City

State

Zip

Country

Telephone

Fax

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).**SIGNATURE of Applicant or Assignee of Record**

Name	Billy Wayne Crue
Signature	<i>Billy Wayne Crue</i>
Date	3/15/01

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

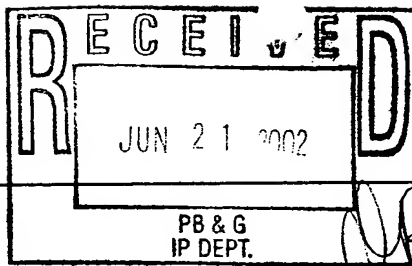
☒ Total of 4 forms are submitted.

Burden: Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



JUNE 12, 2002

PTAS  
ECKERT SEAMANS CHERIN & MELLOTT, LLC  
WILLIAM F. LANG, IV  
600 GRANT STREET, 44TH FLOOR  
PITTSBURGH, PA 15219



*SEAG-19A AGT*  
**CORRECTED  
NOTICE**  
*SEAG 50432*

Chief Information Officer  
Washington, DC 20231  
www.uspto.gov



\*102115018A\*

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT



THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 05/15/2001

REEL/FRAME: 011808/0707

NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

CRUE, BILLY WAYNE

DOC DATE: 05/02/2001

ASSIGNOR:

KHIZROEV, SAKHRAT

DOC DATE: 05/03/2001

ASSIGNOR:

LITVINOV, DMITRI

DOC DATE: 05/03/2001

ASSIGNOR:

CRAWFORD, THOMAS MCLENDON

DOC DATE: 05/10/2001

ASSIGNEE:

SEAGATE TECHNOLOGY LLC  
920 DISC DRIVE  
SCOTTS VALLEY, CALIFORNIA 95066

SERIAL NUMBER: 09809118

FILING DATE: 03/15/2001

PATENT NUMBER:

ISSUE DATE:



011808/0707 PAGE 2

DOROTHY BASMA, PARALEGAL  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

PFO-1595  
-93) 5/15/01  
o. 0651-0011 (exp. 4/94)

REI

06-04-2002

SHEET

U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office



102115018

Settings 000

To the Honorable Commissioner of Patents

Attached original documents or copy thereof.

Name of conveying party(ies):

Willy Wayne Crue

Khurat Khizroev

Nitri Litvinov

Thomas McLendon Crawford

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

Nature of conveyance:

☐ Assignment

☐ Merger

☐ Security Agreement

☐ Change of Name

☐ Other

Execution Date: 5/2/01; 5/3/01; 5/3/01 and  
5/10/01

2. Name and address of receiving party(ies):

Name: Seagate Technology LLC

Internal Address:

Street Address: 920 Disc Drive

City: Scotts Valley State: CA ZIP: 95066

Additional name(s) & address(es) attached? ☐ Yes ☒ No

Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is:

A. Patent Application No.(s)

09/809,118

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

Name and address of party to whom correspondence  
concerning document should be mailed:

Name: William F. Lang, IV

Internal Address:

Eckert Seamans Cherin & Mellott, LLC

Street Address:

600 Grant Street, 44th Floor

City: Pittsburgh State: PA ZIP: 15219

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....\$ 40.00

☒ Enclosed

☐ Authorized to be charged to deposit account

8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

01 BT011 00000079 0503118

DO NOT USE THIS SPACE

Statement and signature.

I, the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

William F. Lang, IV

Name of Person Signing

William F. Lang IV

Signature

May 11, 2001

Date

Total number of pages including cover sheet, attachments, and document:

Mail documents to be recorded with required cover sheet information to:

COPY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

BILLY WAYNE CRUE ET AL.

Serial No.: 09/809,118

Filed: March 15, 2001

Group Art Unit: 2652

:  
:  
: PERPENDICULAR MAGNETIC  
: RECORDING HEAD HAVING A  
: FLUX FOCUSING MAIN POLE  
:  
:

: Attorney Docket No. 284867-00019  
:

**REQUEST FOR CORRECTED NOTICE OF  
RECORDATION OF ASSIGNMENT DOCUMENT**

May 17, 2002

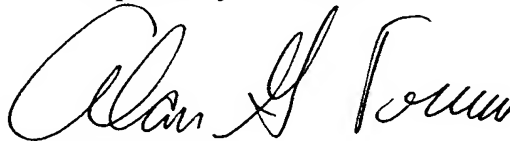
U.S. Patent and Trademark Office  
Assignment Division  
Box Assignments, CG-4  
Suite 320  
1213 Jefferson Davis Highway  
Washington, D.C. 20231

Sir:

Applicant's attorney respectfully requests a corrected Notice Of Recordation Of Assignment Document setting forth that the correct spelling of Assignor's name is "Dmitri Litvinov", which is incorrectly shown on the Notice of Recordation as "Dmitri Litvivov".

Enclosed are copies of the Assignment and Recordation Form Cover Sheet as originally submitted which show the correct spelling of Assignor's name and the Notice Of Recordation of Assignment Document indicating the error made by the Patent and Trademark Office with the spelling correction in red.

Respectfully submitted,



Alan G. Towner  
Registration No. 32,949  
Pietragallo, Bosick & Gordon  
One Oxford Centre, 38th Floor  
301 Grant Street  
Pittsburgh, PA 15219  
Attorney for Applicants

(412) 263-4340

OFFICE OF PUBLIC RECORDS  
- 2002 MAY 17 11  
FINANCE SECTION

## ASSIGNMENT

Attorney Docket No. : 284867-00019  
Seagate Docket No. : SEA 9514.01

WHEREAS, we BILLY WAYNE CRUE of 833 Greentree Road, Apt. 4C, Pittsburgh, Pennsylvania 15220, USA, SAKHRAT KHIZROEV of 6380 Caton Street, Pittsburgh, Pennsylvania, 15217, USA, DMITRI LITVINOV of 5463 Wilkins Avenue, Pittsburgh, Pennsylvania, 15217, USA, and THOMAS MCLENDON CRAWFORD of 5 Worthington Road, Pittsburgh, Pennsylvania 15238, USA are the inventors of an invention entitled PERPENDICULAR MAGNETIC RECORDING HEAD HAVING A FLUX FOCUSING MAIN POLE that is the subject matter of: (check all that apply)

- ☐ a provisional application for Letters Patent which is identifiable in the United States Patent and Trademark Office by Application No. \_\_\_\_\_ filed on \_\_\_\_\_;
- ☒ an application for Letters Patent which is identifiable in the United States Patent and Trademark Office by Application No. 09/809,118, filed on March 15, 2001; and
- ☐ an international application for Letters Patent filed pursuant to the Patent Cooperation Treaty which is identifiable in the United States Receiving Office by Application No. \_\_\_\_\_ filed on \_\_\_\_\_; and

WHEREAS, Seagate Technology LLC, a limited liability company organized and existing under the laws of the State of Delaware and the United States of America, and having offices at 920 Disc Drive, Scotts Valley, California, 95066 USA, ("Assignee") is desirous of acquiring the entire right, title and interest in and to the invention, the applications, and any and all Letters Patent or similar foreign or domestic legal protection;

NOW, THEREFORE, for good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, we transfer to Assignee, its successors and assigns, our entire right, title and interest in and to the invention, the above-identified applications, all provisional applications from which any of the above-identified applications claim priority, corresponding domestic and foreign applications, any continuation, division, renewal, or substitute for the applications, all Letters Patent, any reissue, re-examination, or similar legal protection issuing related to the Letters Patent, and all rights and benefits under any applicable treaty or convention; and we authorize the Director of the United States Patent and Trademark Office or foreign equivalent to issue the Letters Patent or similar legal protection to the Assignee.

We authorize the Assignee, its successors and assigns, to insert in this instrument the filing date(s) and application numbers when ascertained. We further authorize the Assignee, its successors and assigns, or anyone it may properly designate, to apply for Letters Patent or similar legal protection, in its own name if desired, in any and all foreign countries and appoint Assignee the common representative in the above identified international application and any international application for the invention.

We represent to the Assignee, its successors and assigns, that I/we have not and shall not execute any writing or do any act whatsoever conflicting with this Assignment. We, our executors or administrators, will at any time upon request, without additional consideration, but at the expense of the Assignee, its successors and assigns, execute and deliver to Assignee or its legal representatives such additional writings and do such additional acts as the Assignee, its successors and assigns, may deem desirable to perfect its enjoyment of this grant, and render all assistance in making application for and obtaining, maintaining, and enforcing the Letters Patent or similar legal protection on the invention in any and all countries, including without limitation providing testimony in any related interference, litigation or proceeding.

  
BILLY WAYNE CRUE

STATE OF PENNSYLVANIA

Subscribed and sworn to before me at County of Allegheny, a Notary Public, this 2 day of May, 2001.

Notarial Seal  
Charlotte Wlodkowski, Notary Public  
Pittsburgh, Allegheny County  
My Commission Expires Apr. 12, 2004

Member, Pennsylvania Association of Notaries

(SEAL)

COPY

*Sakhrat Khizroev*

SAKHRAT KHIZROEV

Subscribed and sworn to before me at STATE OF PENNSYLVANIA  
COUNTY OF ALLEGHENY, a Notary Public, this 3 day of May, 2001.

*Charlotte Wlodkowski*

Notary Public

(SEAL)

Notarial Seal  
Charlotte Wlodkowski, Notary Public  
Pittsburgh, Allegheny County  
My Commission Expires Apr. 12, 2004

Member, Pennsylvania Association of Notaries

*Dmitri Litvinov*  
DMITRI LITVINOV

Subscribed and sworn to before me at STATE OF PENNSYLVANIA  
COUNTY OF ALLEGHENY, a Notary Public, this 3 day of May, 2001.

*Charlotte Wlodkowski*

Notary Public

(SEAL)

Notarial Seal  
Charlotte Wlodkowski, Notary Public  
Pittsburgh, Allegheny County  
My Commission Expires Apr. 12, 2004

Member, Pennsylvania Association of Notaries

*Thomas Mclendon Crawford*  
THOMAS MCLENDON CRAWFORD

Subscribed and sworn to before me at STATE OF PENNSYLVANIA  
COUNTY OF ALLEGHENY, a Notary Public, this 10 day of May, 2001.

*Charlotte Wlodkowski*

Notary Public

(SEAL)

Notarial Seal  
Charlotte Wlodkowski, Notary Public  
Pittsburgh, Allegheny County  
My Commission Expires Apr. 12, 2004

Member, Pennsylvania Association of Notaries

COPY